

WHAT IS CLAIMED IS:

1. An image reading device, comprising:
  - document reading means for reading an image of a document;
  - prescanning means for performing prescanning of the document by operating the document reading means, and performing at least one of: (i) generating a preview image of the document, and (ii) determining a reading condition of the document;
  - operation input means for receiving a user input for a reading resolution to be used during main scanning;
  - main scanning means for outputting a main scanning image by operating the document reading means to perform main scanning of the document, when the reading resolution to be used during the main scanning is higher than a reading resolution used for the prescanning; and
  - main scanning alternative means for, as an alternative to performing the main scanning, generating and outputting an alternative image based on the read image obtained from the prescanning, when the reading resolution to be used during the main scanning is less than or equal to the reading resolution used for the prescanning.
2. The image reading device of claim 1, wherein the main scanning alternative means generates and outputs the alternative image by: (1) converting a resolution of the read image obtained from the prescanning, (2) generating the alternative image adjusted to the resolution to be used during the main scanning, and (3) outputting the alternative image instead of the main scanning image.
3. The image reading device of claim 1, wherein the main scanning means determines whether a difference between (a) a reading condition used for the prescanning and (b) a reading condition which is scheduled to be used during the main scanning, is outside of a predetermined allowable range, and if the difference is outside of the predetermined allowable range, regardless of the reading resolution, the main scanning is performed, and the main scanning image is output.
4. The image reading device of claim 1, wherein the main scanning alternative means selects an image correction according to a difference between (a) a reading condition used during the prescanning, and (b) a reading condition which is scheduled to be used during the main scanning, and generates the alternative image to which the image correction has been performed.

5. The image reading device of claim 3, wherein the main scanning alternative means selects an image correction according to the difference between (a) the reading condition used during the prescanning, and (b) the reading condition which is scheduled to be used during the main scanning, and generates the alternative image to which the image correction has been performed.

6. An image reading device, comprising:

a document reader that reads an image of a document; and

a controller that:

performs prescanning of the document using the document reader, and that performs at least one of: (i) generating a preview image of the document, and (ii) determining a reading condition of the document;

receives a user input for a reading resolution to be used during main scanning;

when the received reading resolution to be used during the main scanning is higher than a reading resolution used for the prescanning, performs the main scanning of the document using the document reader, and outputs a main scanning image of the document; and

when the reading resolution to be used during the main scanning is less than or equal to the reading resolution used for the prescanning, performs, as an alternative to the main scanning, generation and output of an alternative image based on the read image obtained from the prescanning.

7. The image reading device of claim 6, wherein the controller generates and outputs the alternative image by: (1) conversion of a resolution of the read image obtained from the prescanning, (2) generation of the alternative image adjusted to the resolution to be used during the main scanning, and (3) output of the alternative image instead of the main scanning image.

8. The image reading device of claim 6, wherein the controller also determines whether a difference between (a) a reading condition used for the prescanning and (b) a reading condition which is scheduled to be used during the main scanning, is outside of a predetermined allowable range, and if the difference is outside of the predetermined allowable range, regardless of the reading resolution, the main scanning is performed, and the main scanning image is output.

9. The image reading device of claim 6, wherein the controller also selects an image correction according to a difference between (a) a reading condition used during the prescanning, and (b) a reading condition which is scheduled to be used during the main scanning, and generates the alternative image to which the image correction has been performed.

10. The image reading device of claim 8, wherein the controller also selects an image correction according to the difference between (a) the reading condition used during the prescanning, and (b) the reading condition which is scheduled to be used during the main scanning, and generates the alternative image to which the image correction has been performed.

11. An image reading method that controls a document reader to read an image of a document, the method comprising steps of:

performing prescanning of the document using the document reader, and performing at least one of: (i) generating a preview image of the document, and (ii) determining a reading condition of the document;

receiving a user input for a reading resolution to be used during main scanning;

when the received reading resolution to be used during the main scanning is higher than a reading resolution used for the prescanning, performing the main scanning of the document by controlling the document reader, and outputting the main scanning image; and

when the received reading resolution to be used during the main scanning is less than or equal to the reading resolution used for the prescanning, generating and outputting an alternative image instead of the main scanning image, the alternative image is based on the read image obtained from the prescanning.

12. The method of claim 11, wherein the step of generating and outputting the alternative image includes: (1) converting a resolution of the read image obtained from the prescanning, (2) generating the alternative image adjusted to the resolution to be used during the main scanning, and (3) outputting the alternative image instead of the main scanning image.

13. The method of claim 11, further comprising determining whether a difference between (a) a reading condition used for the prescanning and (b) a reading condition which is scheduled to be used during the main scanning, is outside of a predetermined allowable range, and if the difference is outside of the predetermined allowable range, regardless of the reading resolution, performing the main scanning and outputting the main scanning image.

14. The method of claim 11, further comprising selecting an image correction according to a difference between (a) a reading condition used during the prescanning, and (b) a reading condition which is scheduled to be used during the main scanning, and generating the alternative image to which the image correction has been performed.

15. The method of claim 13, further comprising selecting an image correction according to the difference between (a) the reading condition used during the prescanning, and (b) the reading condition which is scheduled to be used during the main scanning, and generating the alternative image to which the image correction has been performed.

16. A computer-readable, computer program product having computer-executable instructions for performing the method recited in claim 11.

17. A computer-readable, computer program product having computer-executable instructions for performing the method recited in claim 12.

18. A computer-readable, computer program product having computer-executable instructions for performing the method recited in claim 13.

19. A computer-readable, computer program product having computer-executable instructions for performing the method recited in claim 14.

20. A computer-readable, computer program product having computer-executable instructions for performing the method recited in claim 15.

21. An image reading device, comprising:

- a document reader that reads an image of a document; and
- a controller that:
  - performs prescanning of the document using the document reader;
  - determines at least one reading condition to be used for main scanning of the document;
  - determines whether a difference between (a) at least one reading condition used for the prescanning and (b) the at least one reading condition determined to be used for the main scanning, is outside of a predetermined allowable range;
  - when the determined difference is outside of the predetermined allowable range, performs the main scanning of the document using the document reader, and outputs a main scanning image of the document; and
  - when the determined difference is not outside of the predetermined allowable range, performs, as an alternative to the main scanning, generation and output of an alternative image based on the read image obtained from the prescanning.

22. The image reading device of claim 21, wherein the controller generates and outputs the alternative image by: (1) conversion of a resolution of the read image obtained from the prescanning, (2) generation of the alternative image adjusted to a resolution to be used during the main scanning, and (3) output of the alternative image instead of the main scanning image.

23. The image reading device of claim 21, wherein the controller also selects an image correction according to the difference between (a) the at least one reading condition used during the prescanning, and (b) the at least one reading condition determined to be used for the main scanning, and generates the alternative image to which the image correction has been performed.

24. An image reading method that controls a document reader to read an image of a document, the method comprising steps of:

performing prescanning of the document using the document reader;  
determining at least one reading condition to be used for main scanning of the document;

determining whether a difference between (a) at least one reading condition used for the prescanning and (b) the at least one reading condition determined to be used for the main scanning, is outside of a predetermined allowable range;

when the determined difference is outside of the predetermined allowable range, performing the main scanning of the document using the document reader, and outputting a main scanning image of the document; and

when the determined difference is not outside of the predetermined allowable range, performing, as an alternative to the main scanning, generation and output of an alternative image based on the read image obtained from the prescanning.

25. The method of claim 24, wherein the step of generating and outputting the alternative image includes: (1) converting a resolution of the read image obtained from the prescanning, (2) generating the alternative image adjusted to a resolution to be used during the main scanning, and (3) outputting the alternative image instead of the main scanning image.

26. The method of claim 24, further comprising the step of selecting an image correction according to the difference between (a) the at least one reading condition used during the prescanning, and (b) the at least one reading condition determined to be used for the main scanning, and generating the alternative image to which the image correction has been performed.

27. A computer-readable, computer program product having computer-executable instructions for performing the method recited in claim 24.
28. A computer-readable, computer program product having computer-executable instructions for performing the method recited in claim 25.
29. A computer-readable, computer program product having computer-executable instructions for performing the method recited in claim 26.